UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Colonel Robert D. Peterson
District Engineer
U.S. Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701-2070

31 JUL 2009

Re: PN 2008-000370; Horizon Resources, LLC; Synergy Surface Mine No. 2

Dear Colonel Peterson:

The U.S. Environmental Protection Agency has reviewed the U.S. Army Corps of Engineers (Corps) public notice for Horizon Resources, LLC's proposal to discharge dredged and/or fill material into waters of the United States for the construction, operation, and reclamation of the Synergy Surface Mine No. 2. The proposed project involves the construction of four permanent valley fills and two temporary in-stream drainage ponds and two access road crossings, impacting a total of 7,140 linear feet of streams. Construction of the valley fills and the underdrain systems will impact 2,458 linear feet of intermittent stream channel and 2,054 linear feet of ephemeral stream channels. The construction of temporary in-stream sediment control structures will impact 2,555 linear feet of intermittent stream channels. Construction of the access roads will impact 73 linear feet of intermittent channel.

This project is proposed in unnamed tributaries to Ducky Ferrell, Old House Branch, and Workman Branch. Ducky Ferrell is a tributary to West Fork of Pond Fork. Old House Branch and Workman Branch are tributaries to Pond Fork. Pond Fork is a tributary to the Little Coal River, which in turn is a tributary to the Coal River. It appears that the project is located in a previously mined area and is adjacent to existing operations. According to the Coal River total maximum daily load, the primary land use in the Coal River Sub-basin (8-digit hydrologic unit code) is forest, and the Pond Fork watershed (10-digit hydrologic unit code) within the Coal River Sub-basin has approximately 24% of its land use classified as barren/mining. The project is more locally located within the Middle Pond Fork sub-watershed (12-digit hydrologic unit code).

The public notice (PN) states, "[T]he purpose of the proposed project is to discharge dredged/fill material to construct attendant features and associated features (i.e. overburden disposal, coal recovery, sediment controls etc.) and to facilitate efficient extraction of approximately 4.82 million tons of coal reserves in the SMCRA permitted area (883.60 acres of

which 220.00 acres would encompass the proposed valley fills and sediment ponds) for a period of 3.5 years." EPA considers this project purpose to be inappropriate as it narrows the available alternatives for analysis under 40 CFR 230.10(a) by limiting the geographic scope of the project to the SMCRA permitted area. Additionally, EPA believes that stating the project's purpose as the discharge of dredged/fill material could be interpreted to eliminate alternatives which avoid discharge into waters of the U.S., one of the fundamental precepts under the 404(b)(1) Guidelines. Instead, in order to allow for an appropriate analysis, EPA would recommend the project's basic purpose being expressed as "to extract approximately 4.82 million tons of coal and construct attendant features and associated features (i.e. overburden disposal, coal recovery, sediment controls etc.)."

Alternatives Analysis – 40 CFR 230.10(a)

The Clean Water Act Section 404(b)(1) Guidelines provide the substantive environmental criteria upon which permit decisions are to be based. According to the Guidelines, only the least environmentally damaging practicable alternative (LEDPA) can be permitted, and to identify the LEDPA, the applicant's alternatives analysis must examine a full range of alternatives that would avoid and minimize impacts to aquatic resources to the maximum extent practicable. The PN details two potentially practicable mining alternatives; contour/highwall mining (Alternative 3) and mountaintop/area mining (Alternative 4). Based upon the available information, EPA does not believe that Alternative 4 is the LEDPA. The applicant appears to have identified Alternative 3 as another practicable alternative to meet the basic project purpose, which would result in fewer impacts to waters of the U.S. This alternative would reduce impacts to waters of the U.S. by approximately 1700 linear feet. Alternative 3 was not preferred, even though it was stated to be practicable, because it would render an undefined amount of coal reserves sterile that are otherwise recoverable under Alternative 4. In addition to Alternative 3, it is not clear from the PN that other less damaging alternatives have been considered. Full consideration of alternatives under 230.10(a) not only includes geographic siting, but also alternatives in design. Such design modifications could include further backstacking of material, where appropriate from a mining safety and stability standpoint, and other best management practices that would reduce impacts to aquatic resources and protect water quality. To comply with the Guidelines' requirements on alternatives analysis, EPA recommends that the applicant clearly demonstrate why less damaging alternatives are not practicable, and that the Corps conduct a full analysis which evaluates not only geographic alternatives, but design and technology alternatives which avoid impacts to aquatic resources to the maximum extent practicable.

Compliance with Other Environmental Standards – 40 CFR 230.10(b)

230.10(b)(1) of the CWA Section 404(b)(1) Guidelines states that "no discharge of dredged or fill material shall be permitted if it causes or contributes, after consideration of disposal site dilution and dispersion, to violation of any applicable State water quality standard." Based on information currently available, EPA believes this project may result in excursions from State water quality standards. Published studies indicate the activities proposed by the applicant, surface mining with valley fills in Central Appalachia, are strongly related to downstream biological impairment, as indicated by raw taxonomic data, individual metrics that represent important components of the macroinvertebrate assemblage, or when multi-metric indices are considered. These studies show that surface mining impacts on aquatic life are

strongly correlated with ionic strength in the Central Appalachian stream networks. Downstream of valley fill overburden disposal sites, specific conductance and component ions can be elevated as much as 20 to 30 times over the background levels observed at un-mined sites. This increase in conductivity impairs aquatic life use, is persistent over time, and cannot be easily mitigated or removed from stream channels. EPA believes these aquatic life use impairments can rise to a level that may result in a violation of West Virginia's narrative water quality standard and may violate the CWA's antidegradation policy.

More specifically, the Little Coal River system, where the applicant proposes to construct this mine, contains the largest number of impaired stream miles in the Central Appalachian Ecoregion in West Virginia. Pond Fork and West Fork have been identified on West Virginia's CWA Section 303(d) list as impaired streams and have approved total maximum daily loads (TMDLs). Impairments are identified as biological, iron, aluminum, fecal coliform, and sedimentation with mining identified as a contributing source. WV Department of Environmental Protection has approximately twenty sampling locations in the vicinity of the proposed operation. The data collected from these sites indicate that conductivity levels in Pond Fork exceed 1000 µS/cm and West Fork conductivity levels exceed 1500 µS/cm. To demonstrate that this project will not contribute to the impairment of these stream resources, EPA recommends that the Corps condition the permit to require appropriate instream monitoring, effluent consideration of the discharge below the valley fills, and monitoring of the effluent. Should the monitoring show an excursion from the narrative water quality standards mining must stop until the excursions can be remediated. This is to ensure that discharges associated with the project do not cause or contribute to excursions from applicable water quality standards at points downstream from the valley fills, and thus are not inconsistent that requirement in the Section 404(b)(1) Guidelines.

Significant Degradation of the Aquatic Ecosystem – 230.10(c)

The Guidelines prohibit any discharge of dredged or fill material which would cause or contribute to significant degradation of the aquatic ecosystem, with special emphasis placed on the persistence and permanence of effects, both individually and cumulatively. According to the PN, the applicant proposes to place fill material (mining overburden) in headwater streams in four valleys adjacent to the site. Despite the impacts from past mining in this area, EPA believes that these streams may be providing some level of dilution to the impaired downstream receiving waters. Based on EPA's analysis of available GIS data, with the construction of this project approximately 38% of the land area in this Middle Pond Fork subwatershed will be impacted by surface disturbance associated with mining activities. Consequently, this project has the potential to both directly impact the filled streams, as well as further impact the health of the watershed by cumulatively adding to the miles of impaired streams. To determine whether this project will result in significant degradation of the downstream ecosystem, EPA recommends that the applicant conduct a reasonable potential analysis under the National Pollutant Discharge Elimination System (NPDES) regulations and submit all biological and chemical data collected at the project site and the adjacent mine site to the Corps and EPA for review. This information can be used to determine the potential for significant degradation to occur, as well as whether this project will comply with the existing TMDLs, or cause or contribute to a violation of the State's water quality standards or antidegradation policy.

Minimization and Compensation for Unavoidable Impacts – 230.10(d)

On March 31, 2008, EPA and the Corps issued revised regulations governing compensatory mitigation for authorized impacts to wetlands, streams, and other waters of the U.S. under Section 404 of the Clean Water Act. This regulation clearly affirms the requirement to adhere to the mitigation sequence to first avoid impacts to waters of the U.S., followed by minimizing any remaining impacts, and only then compensating for all unavoidable impacts. As stated earlier, EPA believes that based on the information contained in the PN, opportunities exist to further avoid and minimize impacts, and these opportunities should be explored before any discussion of compensation. However, the PN states that the applicant is currently proposing to pay into the WV In-Lieu Fee program as compensation for the stream impacts associated with the proposal.

For any unavoidable impacts from this proposed project, EPA believes that compensation should preferably occur within the 12-digit HUC (Middle Pond Fork subwatershed) or, at a minimum, within the 8-digit HUC (Coal River sub-basin). Currently, EPA is unaware of any identified in-lieu fee projects within the Coal River Sub-Basin, and accordingly the Corps and the applicant should continue to explore permittee-responsible mitigation within the 12-digit HUC, or identify approved in-lieu fee projects within the HUC 8. According to the 2008 mitigation rule, any approved mitigation should ensure the replacement of the lost functions and services of the impacted streams and incorporate performance standards that include observable or measurable physical, chemical, and biological criteria to determine if the compensatory mitigation project meets its objectives. Tto ensure full compensation for lost functions, EPA encourages the mitigation project be in place prior to the discharge of fill material. EPA also recommends that any approved mitigation projects not utilize sediment ditches or groin ditches as compensation. In light of the significant past, present and future mining activities within the Coal River Sub-basin, EPA believes that there may be opportunities to explore watershed mitigation projects that would better address the impacts of mining activities within the sub-basin.

Determination of Cumulative Effects on the Aquatic Ecosystem – 230.11(g)

The Guidelines also clearly require consideration of cumulative impacts, stating that, "[A]lthough the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of the existing aquatic ecosystem." There is evidence of potential significant cumulative impacts within the sub-watershed, and even within the larger 8-digit HUC sub-basin, due to mining activities. In addition to historic and ongoing mining, there are eleven additional mining projects proposed within the Coal River Sub-basin. These include four pending projects under consideration within the enhanced coordination review process established in the *Memorandum of Understanding Among the U.S. Department of the Army, U.S. Department of the Interior, and the U.S. Environmental Protection Agency Implementing the Interagency Action Plan on Appalachian Surface Coal Mining* signed June 11, 2009, and seven permits which have been issued by the Corps, but work has not yet commenced due to ongoing litigation. These eleven additional proposed projects in the Coal River Sub-basin, if constructed as proposed, would impact approximately 33.7 miles (178,122 linear feet) of stream channels. Given the past, present, and

proposed future mining activities within the Coal River Sub-basin, EPA recommends that the Corps conduct a thorough cumulative effects analysis of mining impacts within the sub-basin as part of the decision-making process for this particular permit application. This analysis should include a detailed presentation of past activities, current state of the aquatic ecosystem, and effects from proposed and reasonably foreseeable future projects.

In conclusion, EPA believes that the project as proposed may not comply with the Section 404(b)(1) Guidelines and recommends that additional avoidance and minimization efforts be considered to reduce impacts to waters of the U.S. EPA believes that the project may adversely affect water quality, resulting in an impairment of the local and downstream aquatic life use, and that the project's direct and cumulative impacts may be persistent and permanent and cause or contribute to significant degradation of the aquatic ecosystem.

In light of these concerns, EPA believes that the project, as proposed, may result in substantial and unacceptable impacts to aquatic resources of national importance, as covered in Part IV, paragraph 3(a), of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army. In addition, we believe that it may be appropriate for you to prepare an Environmental Impact Statement (EIS) concerning this proposed project. In making the determination regarding the need to prepare an EIS, we recommend that you consider the effectiveness of any proposed mitigation to reduce the severity of the potential direct, indirect and cumulative impacts to aquatic resources in the Coal River Sub-basin. We would appreciate the opportunity to discuss with you whether an EIS should be prepared. Should you have any questions please feel free to contact Ms. Jessica Martinsen at 215-814-5144 or by email at martinsen.jessica@epa.gov.

Sincerely,

John R. Pomponio, Director
Environmental Assessment and Innovation Division